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Executive Summary:

This Bank Primer delves into the various aspects of analysing a bank from an equity research perspective. Unlike non-financial firms, the analysis starts with a detailed review of the balance sheet. Following this, we examine the inherent risks a bank faces in its operations, with particular attention to credit risk. Once we establish the fundamentals, we move on to valuation methods and key drivers such as Return on Equity (RoE), Cost of Equity (CoE), and growth rates. We then delve into the components of the income statement that impact earnings growth and RoE. Additionally, we discuss capital allocation decisions within the context of banking and touch upon several related points essential to gaining a complete understanding. The primer concludes with an examination of regulatory capital requirements.

Below are few items which we touch upon:

Balance Sheet: A bank's assets and liabilities are usually close to their fair value, making the balance sheet central to its valuation.

Asset Quality: A bank's fortune is directly tied to its ability to manage credit risk, especially within its loan portfolio. Maintaining high asset quality through robust underwriting practices and careful risk management is critical for long-term success.

Funding Profile: A high proportion of low-cost deposits, especially current and savings accounts (CASA), offers a significant advantage in managing interest costs and liquidity risk. Banks must carefully balance their funding mix to optimise profitability while ensuring stability.

Valuation: Banks are usually analysed through relative valuation, which compares a bank to its peers using multiples like price-to-book value (P/BV) and price-to-earnings (P/E). P/BV is often considered a reliable indicator of market expectations.

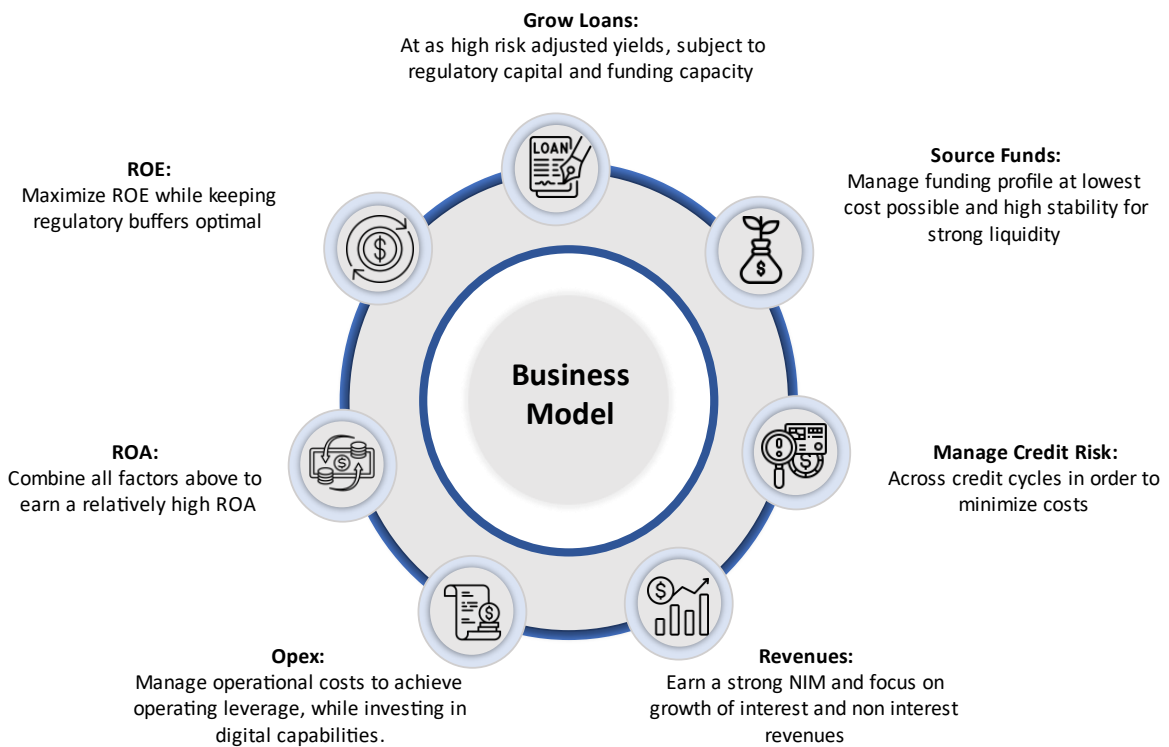
Earnings Growth: A good bank is not necessarily a good investment. Banks must generate earnings that exceed their cost of equity and meet or surpass market expectations. Strong quarterly earnings growth is a key focus for analysts.

Regulatory Capital: Frameworks like Basel III and Basel IV mandate minimum capital requirements to ensure banks can absorb potential losses and withstand financial stress. These frameworks outline minimum capital requirements based on risk-weighted assets, calculated based on factors like credit risk, market risk, and operational risk.

By the conclusion of this note, you should have a good grasp of the banking business model and the different components involved in a thorough financial analysis.



A Banks Business Model – A Birds Eye View:



The graph above illustrates a bank's business lifecycle. It's crucial to begin with the Balance Sheet instead of the Income Statement or Cash Flows. Learning why can be quite valuable.

Balance Sheet:

Importance of the understanding Balance Sheet of a Bank

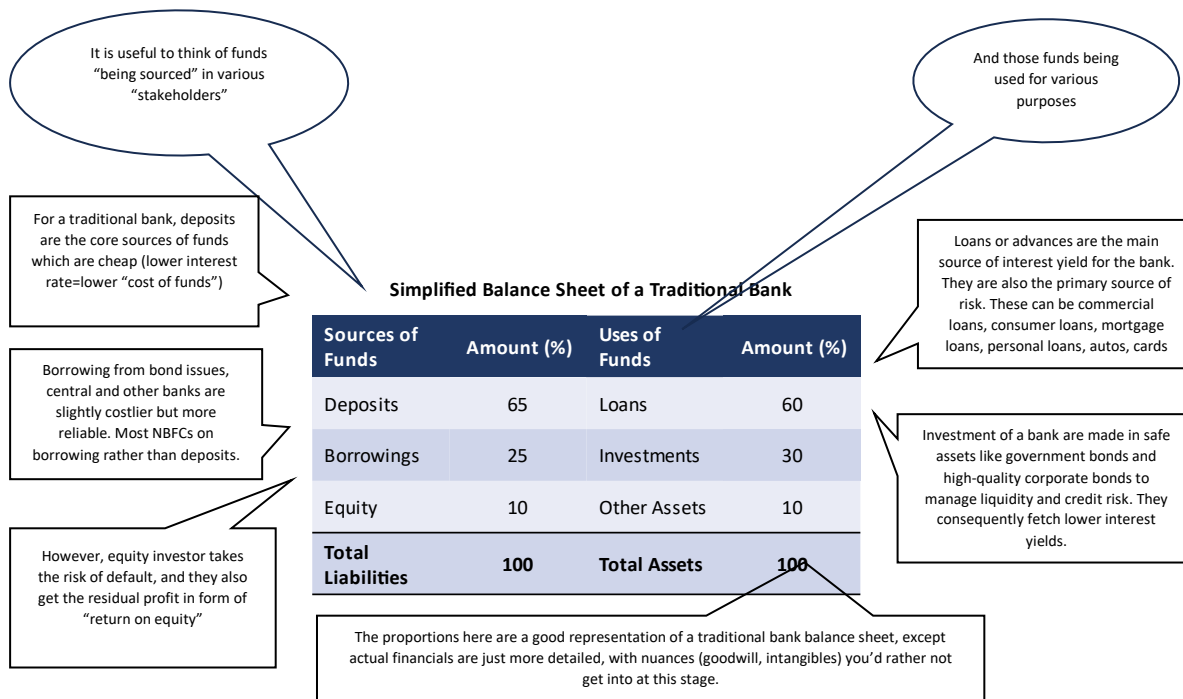
| | |
|---|--|
| A banks' working capital | A bank's primary functionality is to provide credit to businesses and individuals. To achieve this, it needs to obtain funds in form of deposits or from other institutions and channel the funds various loans and investments. These funds, in essence, are the working capital for a bank and form part of the balance sheet. |
| A true representation of | A bank's assets and liabilities are often near their fair value (which will be evident below) and make up major part of a banks valuation. This differs from non-financial companies, like auto manufacturers, where assets and liabilities on Balance Sheet can be distorted, and anyways, their valuation is based on earnings, cash flows and intangibles such as brand reputation and expertise. |
| Key Drivers of Revenues and Earnings | The profitability of a bank is primarily influenced by its loan portfolio and investment activities, which generate interest income. Additionally, profit margins are affected by balance sheet components such as deposits, funding sources, and the risk profile of loans. Essentially, the balance sheet is a key |



determinant of a bank's financial success, although other factors like interest rates and operational expenses also play a role.

In contrast to financial entities, the revenue expansion of non-financial corporations is shaped by a multitude of determinants, such as the prevailing market demand for its products or services. positioning the balance sheet as merely a single element in the broader context of valuation.

Deconstructing the Balance Sheet:



Equity or "Net Asset Value" or "Book Value" represents what is traded on the stock market. Our objective in Equity Research is to accurately determine the "Market Value" of this "Book Value."

Furthermore, the "Net Asset Value" is calculated as the difference between all assets at fair value and all liabilities at fair value. Accurate measurement of these elements is essential. This process includes excluding items such as goodwill and non-usable DTAs, which also helps make metrics across various banks comparable.

Standardizing key metrics such as "book value" or ROE is essential for ensuring comparability when using relative valuation methods, which we will cover soon. However, grasping the balance sheet fully requires a clear understanding of the types of risks the bank is assuming, which we cover next.



Sources of Risk for a Bank:

Any banker worth his will tells you that risk management makes or breaks a bank.

Risk Categories:

| | |
|---------------------------|---|
| Credit Risk | The most important risk, on loans and investments made (see detailed explanation below) |
| Liquidity Risk | Banks need to maintain sufficient liquid assets to cover cash outflows as they come due – measured by LCR ratio and determined by funding profile and Asset-liability management. |
| Interest Rate Risk | The sensitivity of interest rate margins and investment and liability values to interest rate changes; impacts the cost of equity as well in valuation as well. |
| Equity Market Risk | Risk of Equity investments and similar assets going down in market value |
| Operational Risk | Digital, Operations, Reputation etc. |

Credit Risk: Asset Quality vs. Earnings Cycle

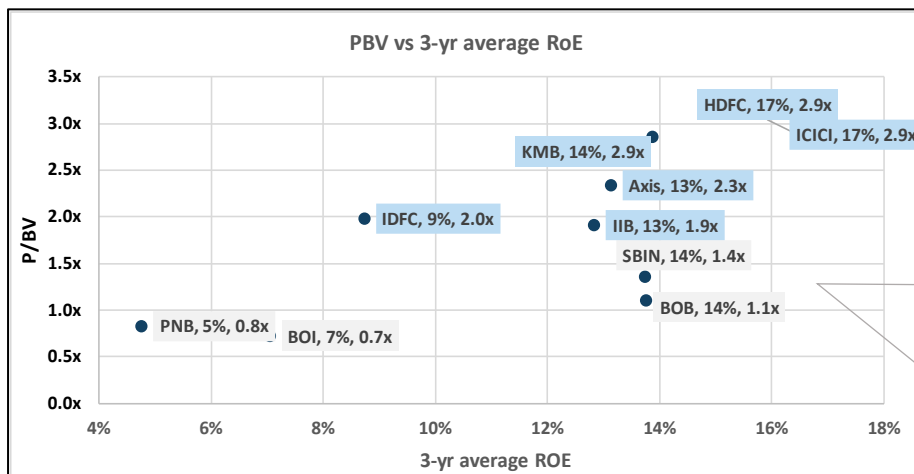
While other risks are not to be ignored, one golden rule to keep in mind is that asset quality is, easily, the single most important factor in determining a banks fortune over the long run. No bank that undergoes a bad loan cycle can sustain good market valuations. History is as important as recent results.

A quick case study to demonstrate this point:

Relative Valuation of Indian Private vs State-owned Banks:

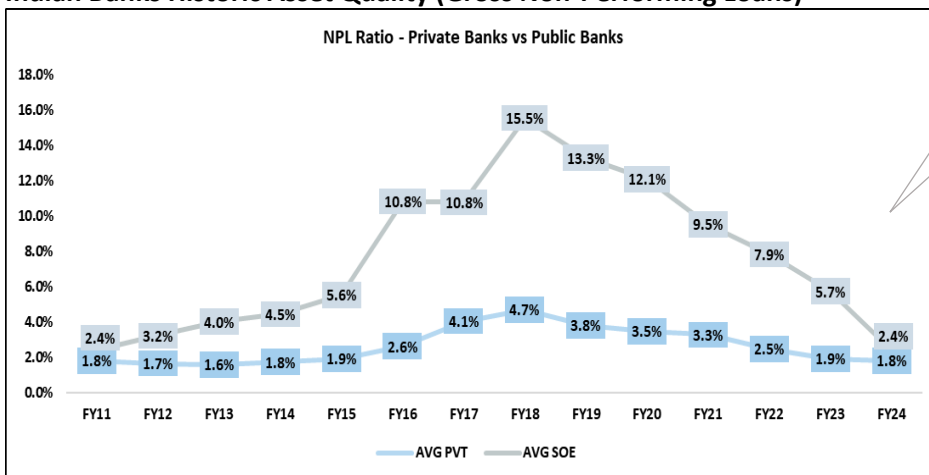
(see the later sections to understand more about concepts like P/BV and ROE)





See the State-owned (SOE) banks in gray here - SBIN and BOB have RoE on par with private banks but still trade at relatively lower valuation (P/BV), well below the private peers even after strong rally in 2023.

Indian Banks Historic Asset Quality (Gross Non-Performing Loans)



The contrast in gross NPL ratios of SOE banks vs Private banks explains the contrast in valuation above.

Private Banks on the other hand, were not very worse off even during the peak bad loan cleanup phase of 2018.

For full context, back in 2015-16, India’s RBI initiated a thorough clean-up of concealed NPLs, compelling banks to openly reveal their bad debts. As anticipated, PSU banks, which held substantial amounts of large-corporate debt, reported NPA ratios that were three times higher than those disclosed the previous year. It became apparent that political interference and lenient bureaucracy over many decades contributed to the predicament these PSU banks faced. Consequently, it is not surprising that the market hesitates to value them at the same multiples as private banks, despite comparable asset quality and ROE performance in recent years.

Bottom Line: Bank valuations are driven by earnings, contingent upon reliably pristine asset quality. The term 'reliably' underscores the importance of a consistent record of robust underwriting skills, corporate governance, and adherence to reporting and compliance practices.

Now, it's important to identify the main sources of credit risk. One source is bond investments, but since most bonds are sovereign or high-quality corporate debt, this risk is typically low. The main source of credit risk originates from the particular kinds of loans that a bank specialises in. Additionally, observe the relationship between the degree of risk and the resulting yields.



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| Loan Type | Loan Yield | Risk | Security | Description |
|---------------------------------|-----------------|-------------------------|----------------------------|--|
| Retail & Cards loans | High | Moderate to High | Unsecured | Personal loans and credit cards to individuals. Preferred due to granularity of loans (small loan amounts to large number customers) making credit risk easier to manage for a relatively high yield on loans. However, still subject to broader economic environment. |
| Vehicle loans | Moderate | Moderate | Secured by vehicles | Retail loans facilitating the purchase of vehicles. |
| Mortgage loans | Low | Low | Secured by property | Safest type of loan but low yields. Largest business segment catering to retail customers. |
| SME | High | High | Mixed | Business loans to SMEs have relatively high yields but asset quality is very cyclical (strong correlation to economic cycles). |
| Wholesale | Moderate | Moderate | Mixed | These include several types of large accounts (NBFCs, large corporates, infrastructure) with different risk and return profiles. <ul style="list-style-type: none"> - Infrastructure loans are historically notorious for going, especially at PSU banks. - NBFCs, which use the funds to lend themselves, are increasingly an important segment for large banks. - Large corporate loans are driven by the private capex cycle which has been stagnant for many years now. |
| Microfinance loans | High | High | Unsecured | Rural loans under govt. schemes and otherwise. Highest yield segment but with similarly high risk. Specific to EMs, a Covid-like event can lead to significant default levels. |

Operational risks:

Although credit risk remains the primary concern, several other risks are gaining prominence in today's financial landscape. Beyond the usual threats like business disruptions and fraud for banks, failures in digital operations—such as data breaches, lapses in client KYC processes, and application downtimes—can lead to significant regulatory penalties and damage to reputation. Recent instances of regulatory interventions, including fines or restrictions on business activities, have substantially affected stock market performances.

Having discussed the risks associated with the bank's assets, let's now examine its funding profile.



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Funding Profile:

Some people will say that a bank's business truly starts when it has a secure source of funding, and they are not wrong. Funding determines the liquidity risk of a bank as well as its stability. That is even before we talk about the most important effect of the funding profile - interest costs.

Let us look at a sample funding profile of a large bank to understand the various aspects.

Replace SBIN with “A Large Banks’ representative Funding profile”

| A leading Bank's Funding Profile | 2023 | 2024 |
|---------------------------------------|-------------|-------------|
| Institutional Borrowings (A) | 11% | 12% |
| Savings | 32% | 30% |
| Current Accounts | 6% | 5% |
| CASA Ratio (% Total Funding) | 38% | 35% |
| Term Deposits (FDs and Others) | 52% | 54% |
| Total Customer Deposits (B) | 89% | 88% |
| Total Funding (A+B) | 100% | 100% |
| Total Deposit Growth (% Y-o-Y) | 9% | 11% |
| LDR | 74% | 77% |

Institutional borrowings have higher cost and are more sensitive to changes in benchmark interest rates.

CASA ('Current and Savings accounts') is the least expense source of funding for a bank, well below even the risk-free bonds in many cases. It is also surprisingly sticky. Hence it is no surprise that higher CASA is preferred and is often a game-changer in terms of unit-economics.

LDR (Loans-deposits ratio) shows the proportion of loans which are financed by Deposits. Since these deposits are mainly CASA and FDs, they come with a cost advantage and have more stability. Hence Higher LDR is preferred. As you may have guessed, there are many moving parts within this ratio.

Deposits growth is important in relation to loan growth and impacts LDR adversely if below par. Within this, CASA growth is again closely measured as that impacts the CASA ratio vs the overall funding profile.

Valuation:

With the foundational concepts covered, we can dive into the more interesting aspects. Assets can be valued in two broad ways: absolute valuation and relative valuation.

Practitioners prefer relative valuation for bank valuation because doing a DCF on a bank is complex, though possible - see Prof. Ashwanth Damodaran’s webinars on bank valuations for more on this.



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That being said, the principles of the DCF or DDM formulas can be applied to determine “justified” P/E and P/BV multiples. The foundational elements remain consistent for both a DCF-driven valuation and a multiples-based valuation. Ultimately, we're considering long-term RoE, CoE, sustainable growth, reinvestments, and dividend payouts.

However, since multiple-based valuation fundamentally involves comparing companies, we assign less emphasis to specific assumptions for a single company. Instead, we consider the risk, return, and growth factors of a bank relative to its peers in similar markets. This approach is reasonable because predicting long-term growth and discount rates is highly speculative. For our analysis, it's more important to focus on the broader outlook for the company within its economic and sectoral context, rather than obsessing over whether the sustainable growth rate should be 6% or 7%.

To evaluate a cohort of banks within the same market from an "Equity Strategy" standpoint, it's essential to form an average sector-wide view on the aforementioned factors. Comprehending the macro-economic environment plays a crucial role in this. Subsequently, we assess whether the median valuation multiples seen in current prices are justified by these fundamentals when compared to historical valuations and benchmarks from other areas and contexts.

There are two methods to do a relative valuation for a bank – P/BV and P/E.

A Bank’s financials to its Valuation metrics:

| | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|------------|-------------|------------------------------|---|---|--------------------|------------|--|-----------|---|---------|--------------------|--------------|-----------------|-----|-----|------------|-----|
| + | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Assets</td></tr> <tr><td>Loans</td></tr> <tr><td>Investments and Other assets</td></tr> <tr><td style="background-color: #e6f2ff;">Funding</td></tr> <tr><td>Deposits</td></tr> <tr><td>Wholesale funding</td></tr> <tr><td style="background-color: #e6f2ff;">Book Value</td></tr> <tr><td>Net Equity</td></tr> </table> | Assets | Loans | Investments and Other assets | Funding | Deposits | Wholesale funding | Book Value | Net Equity | + | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Revenue</td></tr> <tr><td>Core Income</td></tr> <tr><td>Other Income</td></tr> <tr><td style="background-color: #e6f2ff;">OpEx</td></tr> <tr><td>OPM</td></tr> <tr><td>NPM</td></tr> <tr><td style="background-color: #e6f2ff;">Net Income</td></tr> <tr><td>EPS</td></tr> </table> | Revenue | Core Income | Other Income | OpEx | OPM | NPM | Net Income | EPS |
| Assets | | | | | | | | | | | | | | | | | | | |
| Loans | | | | | | | | | | | | | | | | | | | |
| Investments and Other assets | | | | | | | | | | | | | | | | | | | |
| Funding | | | | | | | | | | | | | | | | | | | |
| Deposits | | | | | | | | | | | | | | | | | | | |
| Wholesale funding | | | | | | | | | | | | | | | | | | | |
| Book Value | | | | | | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | | | | | | |
| Revenue | | | | | | | | | | | | | | | | | | | |
| Core Income | | | | | | | | | | | | | | | | | | | |
| Other Income | | | | | | | | | | | | | | | | | | | |
| OpEx | | | | | | | | | | | | | | | | | | | |
| OPM | | | | | | | | | | | | | | | | | | | |
| NPM | | | | | | | | | | | | | | | | | | | |
| Net Income | | | | | | | | | | | | | | | | | | | |
| EPS | | | | | | | | | | | | | | | | | | | |
| - | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Funding</td></tr> <tr><td>Deposits</td></tr> <tr><td>Wholesale funding</td></tr> </table> | Funding | Deposits | Wholesale funding | - | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">OpEx</td></tr> <tr><td>OPM</td></tr> <tr><td>NPM</td></tr> </table> | OpEx | OPM | NPM | | | | | | | | | | |
| Funding | | | | | | | | | | | | | | | | | | | |
| Deposits | | | | | | | | | | | | | | | | | | | |
| Wholesale funding | | | | | | | | | | | | | | | | | | | |
| OpEx | | | | | | | | | | | | | | | | | | | |
| OPM | | | | | | | | | | | | | | | | | | | |
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| = | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Book Value</td></tr> <tr><td>Net Equity</td></tr> </table> | Book Value | Net Equity | = | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Net Income</td></tr> <tr><td>EPS</td></tr> </table> | Net Income | EPS | | | | | | | | | | | | |
| Book Value | | | | | | | | | | | | | | | | | | | |
| Net Equity | | | | | | | | | | | | | | | | | | | |
| Net Income | | | | | | | | | | | | | | | | | | | |
| EPS | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Valuation</td></tr> <tr><td>Price/ Book</td></tr> <tr><td style="background-color: #e6f2ff;">Drivers</td></tr> <tr><td>RoE</td></tr> <tr><td>(-) CoE</td></tr> <tr><td>Sustainable Growth</td></tr> </table> | Valuation | Price/ Book | Drivers | RoE | (-) CoE | Sustainable Growth | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="background-color: #e6f2ff;">Valuation</td></tr> <tr><td>Price/ Earnings</td></tr> <tr><td style="background-color: #e6f2ff;">Drivers</td></tr> <tr><td>Sustainable Growth</td></tr> <tr><td>(-) CoE</td></tr> <tr><td>Retention Ratio</td></tr> </table> | Valuation | Price/ Earnings | Drivers | Sustainable Growth | (-) CoE | Retention Ratio | | | | |
| Valuation | | | | | | | | | | | | | | | | | | | |
| Price/ Book | | | | | | | | | | | | | | | | | | | |
| Drivers | | | | | | | | | | | | | | | | | | | |
| RoE | | | | | | | | | | | | | | | | | | | |
| (-) CoE | | | | | | | | | | | | | | | | | | | |
| Sustainable Growth | | | | | | | | | | | | | | | | | | | |
| Valuation | | | | | | | | | | | | | | | | | | | |
| Price/ Earnings | | | | | | | | | | | | | | | | | | | |
| Drivers | | | | | | | | | | | | | | | | | | | |
| Sustainable Growth | | | | | | | | | | | | | | | | | | | |
| (-) CoE | | | | | | | | | | | | | | | | | | | |
| Retention Ratio | | | | | | | | | | | | | | | | | | | |

Naturally, there are other metrics like P/S and EV/EBITDA, but these are not relevant to conventional banks.

Interestingly, only financial firms can reliably be valued using both P/BV and P/E methods. For non-financial firms, P/BV isn't dependable due to previously mentioned reasons. Ideally, P/E and P/BV should yield similar results, but markets aren't perfect, and P/BV often serves as the best measure of market expectations compared to peers.

However, some analysts do prefer P/E comparisons due to its focus on earnings growth.



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Determinants of a bank valuation:

| | |
|---------------|---|
| ROE | RoE, especially in excess of CoE, is an important driver. The whole income statement (and the Income Statement Metrics we will discuss later) is factored into the ROE. |
| Growth | Though the DCF models require thinking about sustainable growth of earnings, which is a long-term view (think decades), the focus is usually on short-term (quarterly) and medium-term loan growth (2-5 years) with an implicit assumption that this translates to long-term as well proportionately. |
| CoE | CoE is usually a factor of the market (EM or DM), the riskiness of the loan book (NPA levels and funding profile) and loan book mix (microfinance-loans and unsecured loans are considered higher risk for example), regulatory regime, among several other things. |

Earnings vs Valuations:

Consider another insightful observation by Prof. Ashwanth Damodaran: strong banks do not always translate to good investments. A bank may possess excellent asset quality and a beneficial impact on its ecosystem, yet still fail to generate sufficient profits to consistently excel in the stock market. This is because earnings are evaluated against the expectations determined by market valuations. If an investment is overpriced, it must continually meet high standards to be justified.

It is equally possible for a bank to earn just enough to cover its Cost of Equity (CoE) with limited prospects for growth despite having a robust balance sheet; hence, its stock performance may stagnate, making it an unattractive equity investment, although it might be a prime choice for bondholders.

Earnings:

With the foundational elements established, we can now examine the earnings metrics that assess financial performance. Below, you'll find a DuPont table, which can be considered as the unit-economics of the banking sector.



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| Note | A Global Bank Du- Pont analysis (% TAA – Total Avg. Assets) | FY21 | FY22 | FY23 | FY24 |
|------|--|-------------|--------------|--------------|--------------|
| | Net Interest Income (% TAA) | 2.6% | 2.5% | 2.8% | 2.7% |
| 1 | NII Growth | 13% | 9% | 20% | 9% |
| | Reported NIM (%) | 3.0% | 3.1% | 3.4% | 3.3% |
| | Non-Interest Income (% TAA) | 1.0% | 0.9% | 0.7% | 0.9% |
| 2 | Non-II Growth | -2% | -7% | -10% | 47% |
| | Total Revenue (% TAA) | 3.6% | 3.4% | 3.5% | 3.6% |
| | Total Operating Expenses (%TAA) | 1.9% | 1.8% | 1.9% | 2.0% |
| 3 | Cost/Income Ratio (%) | 61% | 61% | 54% | 56% |
| | Pre-Provision Operating Profit (% TAA) | 1.7% | 1.6% | 1.6% | 1.6% |
| 4 | PPOP Growth | 7% | 5% | 11% | 12% |
| | Loan Loss Provisions (%TAA) | 1.0% | 0.5% | 0.3% | 0.2% |
| 5 | Credit Cost (% of PPOP) | 62% | 32% | 20% | 13% |
| | Credit Cost (bps of Gross Loans) | 177 | 91 | 54 | 34 |
| | PBT (%TAA) | 0.6% | 1.1% | 1.3% | 1.4% |
| | Tax (%TAA) | 0.2% | 0.2% | 0.3% | 0.4% |
| | ROA (PAT % TAA) | 0.5% | 0.7% | 1.0% | 1.0% |
| | EPS Growth | -64% | 55% | 59% | 22% |
| 6 | Leverage | 17x | 18x | 17x | 17x |
| | ROE | 8.4% | 11.9% | 16.5% | 17.3% |

A DuPont analysis for a bank measures all the lines in the income statement as a proportion of avg. operating assets in the balance sheet and hence arrives at the ROA (Net Profit After Tax as % of avg. assets) as the bottom line.

Given that ROA, and ROE (which is just ROA x Leverage (Total Assets/ Equity)), are the key comparable metrics for performance and valuations, this analysis provides a complete picture, especially in combination with other key metrics we discuss below.

Note: The bold, italicised lines in the table above represent ratios or metrics for understanding different line items, which we discuss below. The blue lines are expressed as a percentage of average assets (% TAA) and are part of the DuPont analysis.

Net Interest Income

Net Interest Income (NII), which is usually the main revenue head, is a factor of a. Net Interest Margins (NIM) and b. Growth of the Loan Base:

- a. **Net Interest Margin (NIM): Difference between “yield” on loans advanced, and “cost of funds” i.e., interest expense on deposits and other funds.**

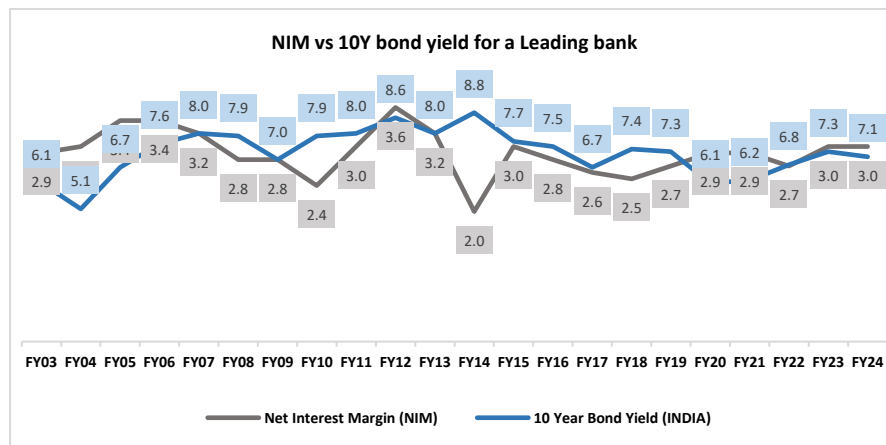
Understanding the central government's interest rate policy and the interest rate cycle is crucial. Policy rates influence both loan yields and interest expenses, but the timing of their impact can differ greatly. For example, in an environment of rising interest rates, loan yields are adjusted more quickly than deposit costs (particularly fixed deposits). Recently, during a high-point in the interest rate cycle, deposit costs have begun to rise due to increased competition for fixed deposits and other funds. This is occurring in an environment where higher interest rates over several quarters make fixed deposits more expensive, while robust equity markets compete for the same funds.

Consequently, banks in various regions are experiencing NIM pressure as interest yields remain flat and interest expenses rise. This results in lower revenues and puts pressure on earnings.



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NIM vs 10Y bond yield for a Leading bank in EM:



Strong correlation between 10Y yields and NIMs of banks in medium-term. Expect more nuance in short-term.

- b. **Loan Growth:** Since the previously mentioned NIM is applied to loans (and investments) to calculate the NII, it is evident that loan growth plays a crucial role in determining NII. Equally significant is the distribution of loan growth across various segments such as credit cards or mortgages, as these categories have considerably different yields (and risks).

Non-Interest Income

This is the second broad head under revenues and includes fee income generated from loans and corporate financing, as well as commissions from third-party products such as insurance and asset management. Non-recurring items like trading gains and currency fluctuations need to be excluded for more accurate forecasting.

Establishing stable sources of recurring non-interest income, which contributes significantly to total revenues, is a goal for many banks. Given that some streams like third-party commissions have high margins, they can serve as a substantial competitive advantage.

Cost-Income (OpEX) Ratio

A bank's primary operating expenses include staff costs from branches and central operations, along with digital investments and other operating costs. While maintaining a stable ratio in relation to the asset base is beneficial, significant growth in assets can offer operating leverage. Moreover, enhancing the cost-income ratio is often a point of pride for many management teams.

Pre-provision Operating Profit (PPoP)

This represents core operating earnings prior to accounting for loan-loss provisions (LLP). It serves as a crucial metric, indicating the bank's capacity to absorb losses from its loan portfolio. Moreover, since LLPs can fluctuate with credit cycles, a PPoP effectively gauges a bank's consistent operational efficiency.



Loan Loss Provisions (LLP; Credit Costs)

These are provisions for expected credit losses on a bank's loan and investment portfolios (Ind AS 109; IFRS9 globally). A bank must estimate future credit losses on its current loans and provide for these incrementally each quarter, considering the cyclical nature of different loan segments.

Credit losses are the most crucial factor in determining the long-term financial performance of banks, particularly in emerging markets where economic fluctuations can significantly impact asset quality. Banks that manage to generate the aforementioned PPOP without incurring substantial credit costs thrive, though achieving this is no small feat.

Logically, LLP is influenced by the proportion of non-performing assets (NPA) within the loan portfolio. A bank with a high percentage of NPAs must allocate larger provisions to cover the depreciation of these assets' value, which can also reduce shareholders' equity if the LLP is substantial enough to cause an income statement loss. Currently, we are experiencing a benign asset quality environment, even in major emerging markets like ASEAN, India, and Brazil, resulting in minimal credit costs. However, this situation can change with economic cycles. Thus, it is widely accepted that banks adopting more conservative provisioning practices during prosperous times tend to perform better during downturns.

ROA, ROE and the Capital Allocation Decision

In essence, a thriving bank needs to continuously expand its loan portfolio and secure high yields on these loans while ensuring that funding costs remain low and funding profile remains stable. Additionally, it should enhance income from fees and commissions, achieve operational efficiency with a minimal OpEx ratio, and uphold superior asset quality to reduce credit costs. This approach will bolster the ROA, indicating a robust PAT relative to assets.

The proportion of equity supporting the asset base, or leverage multiplier, dictates the RoE. The level of leverage depends on the riskiness of the loan book, which primarily influences the required regulatory capital (discussed in the next section).

- **Capital Allocation:** For a bank to justify re-investing in its business, its ROE must significantly exceed the market cost of equity. If it doesn't, management should distribute excess cash to shareholders via dividends and buybacks, as seen in Europe and the USA. In emerging markets, however, banks often reinvest profits into regulatory capital to expand their loan portfolios due to opportunities for profitable growth.
- **EPS Growth:** While strong ROE and ROAs are positive indicators, it's crucial to remember that we are currently in an earnings cycle rather than a bad loan cycle. This implies that stock valuations are primarily influenced by earnings growth, which considers incremental changes in various business aspects on a quarterly basis. Therefore, robust quarterly earnings growth that meets or surpasses market expectations is essential, particularly for banks trading at strong valuations.



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(think of P/BV ratios >2x in EM and >1.2x in DM). As a result, analysts place greater emphasis on EPS growth and the factors driving it.

Regulatory Capital:

Bank regulators in emerging markets (EM) usually follow the Basel III framework for prescribing capital requirements, whereas those in developed markets (DM) are moving towards the Basel IV framework. These frameworks guarantee that banks hold adequate regulatory capital to efficiently manage risks and sustain financial stability. Basel IV enhances Basel III by improving risk-weighted asset calculations, incorporating additional capital buffers, and standardizing risk measurement to boost consistency and comparability among banks.

Regulators mandate that banks maintain a minimum capital requirement to absorb losses and operate during financial stress. This is calculated based on risk-weighted assets (RWA), reflecting the risk of the bank's holdings. Common Equity Tier 1 (CET1) capital, which includes common stock and retained earnings, is crucial as it can quickly absorb losses and keep the bank solvent. Other capital tiers like Additional Tier 1 and Tier 2 include hybrid or preferred debt meeting specific criteria.

As an example, the capital requirement in major DMs is broken down into several components as below:

- **Minimum Capital Requirement:**
 - **Common Equity Tier 1 (CET1):** 4.5% of risk-weighted assets.
 - **Total Capital:** 8% of risk-weighted assets, which includes CET1 and other types of capital.
- **Capital Buffers:**
 - **Capital Conservation Buffer:** An additional 2.5% of CET1.
 - **Countercyclical Buffer:** Up to 2.5% of CET1, applied during periods of high credit growth.

When these buffers are added, the total capital requirement can be higher, ensuring that banks have sufficient capital to absorb losses and remain stable during financial stress. This comprehensive approach helps maintain the overall health and stability of the banking system.

The main components that determine risk-weighted assets (RWA) are as follows:

| Components of RWA | Description |
|------------------------------------|--|
| Credit Risk | Major component that covers risk of loss on loans, mortgages, and other credit exposures. |
| Market Risk | Risk of losses in on- and off-balance-sheet positions arising from movements in market prices. Includes interest rate risk, equity risk, and commodity risk. |
| Operational Risk | Risk of loss resulting from inadequate or failed internal processes, people, systems, or external events. |
| Off-Balance-Sheet Exposures | Includes items like guarantees, LoC and derivative exposures. |

